

To: Edwin Roberson[eroberso@blm.gov]
From: Ashcroft, Tyler
Sent: 2017-12-08T16:25:49-05:00
Importance: Normal
Subject: oil and gas potential
Received: 2017-12-08T16:26:09-05:00

EnergyDev BENM.pdf

1. Cursory Review of the Mineral Potential Occurrence within the Bears Ears NM BLM.pdf

map17_Potential_For_Oil_Gas.pdf

BENM_12082017_OG_EOI.pdf

Oil_gas_cat_b4_BENM.pdf

Ed,

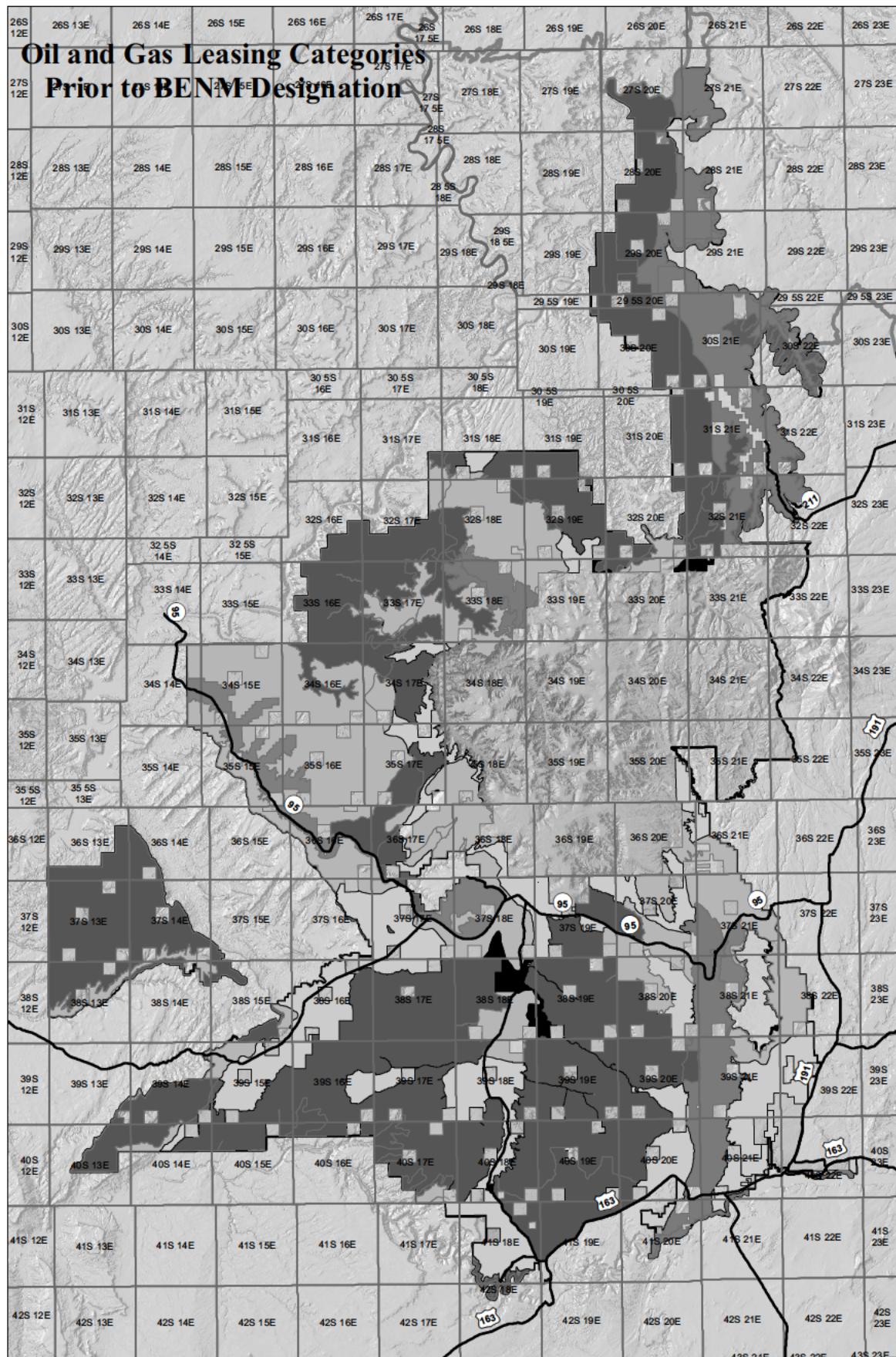
Attached are a few maps showing oil, gas, and other mineral related potential in the Bears Ears National Monument. A description of each document is included below.

- EnergyDev BENM- This document was produced by the State of Utah in advance of the Secretary's visit to BENM. It shows mineral potential and historic development.
- Cursory Review of the Mineral Potential Occurrence within Bears Ears NM- Includes basic information regarding multiple mineral resources in original BENM, including oil and gas potential. Developed by the BLM Utah State Office immediately after the original designation.
- Map 17 Potential For Oil Gas- This map is from the 2008 Proposed RMP Final EIS. It shows oil and gas potential.
- BENM 12082017 OG EOI- This map shows oil and gas lease parcel nominations/expressions of interest received since 2012. These are areas industry has most recently been interested in.
- Oil gas cat B4 BENM- This map does not show potential, but does show the areas that were available for oil and gas development prior to establishment of the monument. The leasing categories come from the Monticello RMP (2008), as amended by the Moab MLP (2016).

Please let me know if this information meets your needs or if additional information is needed.

--

Tyler Ashcroft
Project Manager
Bureau of Land Management
(801)-539-4068

**Legend**

| Oil Gas Leasing Categories | |
|----------------------------|-----------------------|
| | SU/TL |
| | mg |
| | Standard |
| | Field Office Boundary |
| used | |
| SU | |

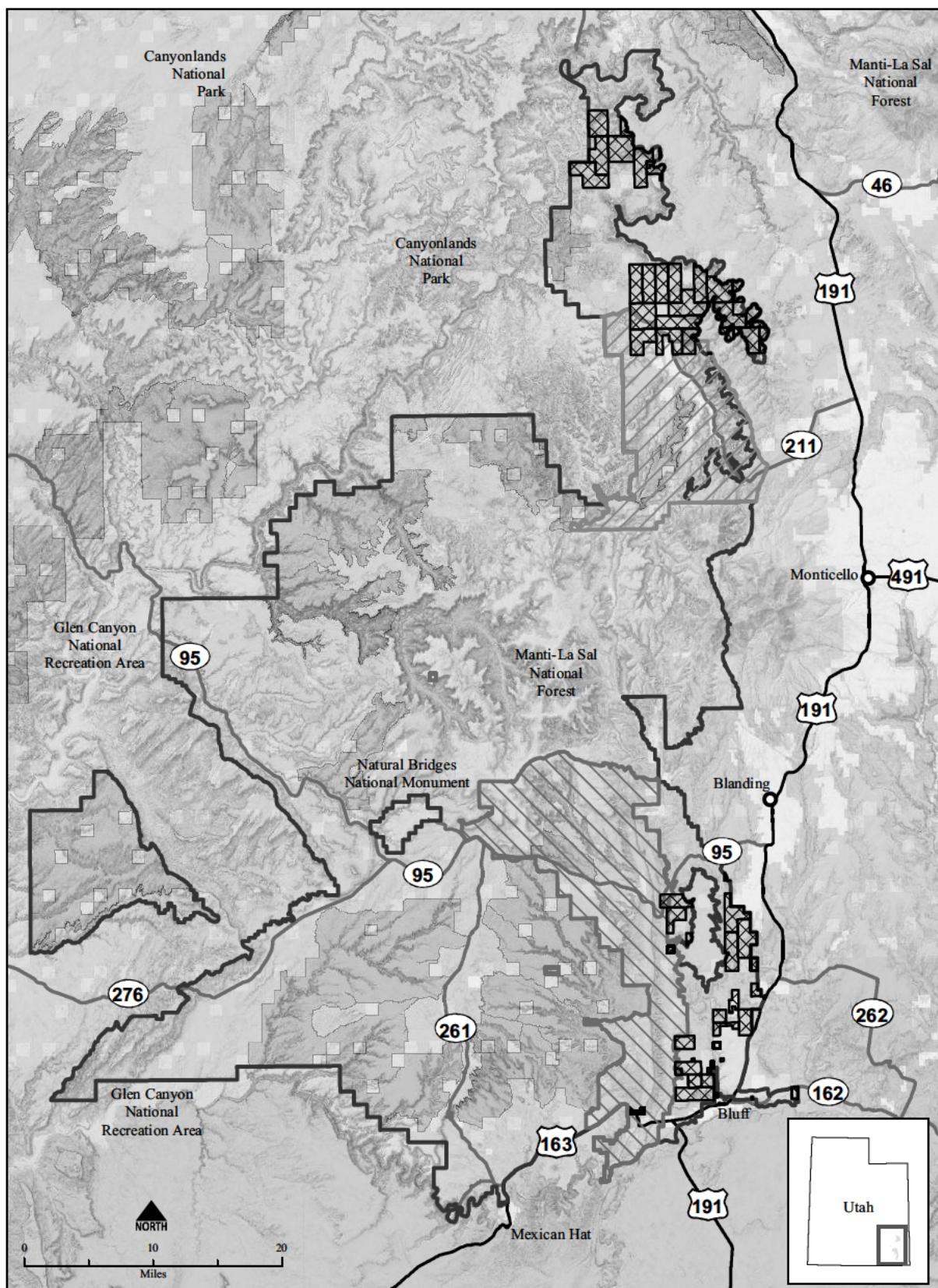
N

DOI-2019-08 00025

0 2.5 5 10 15 20 Miles

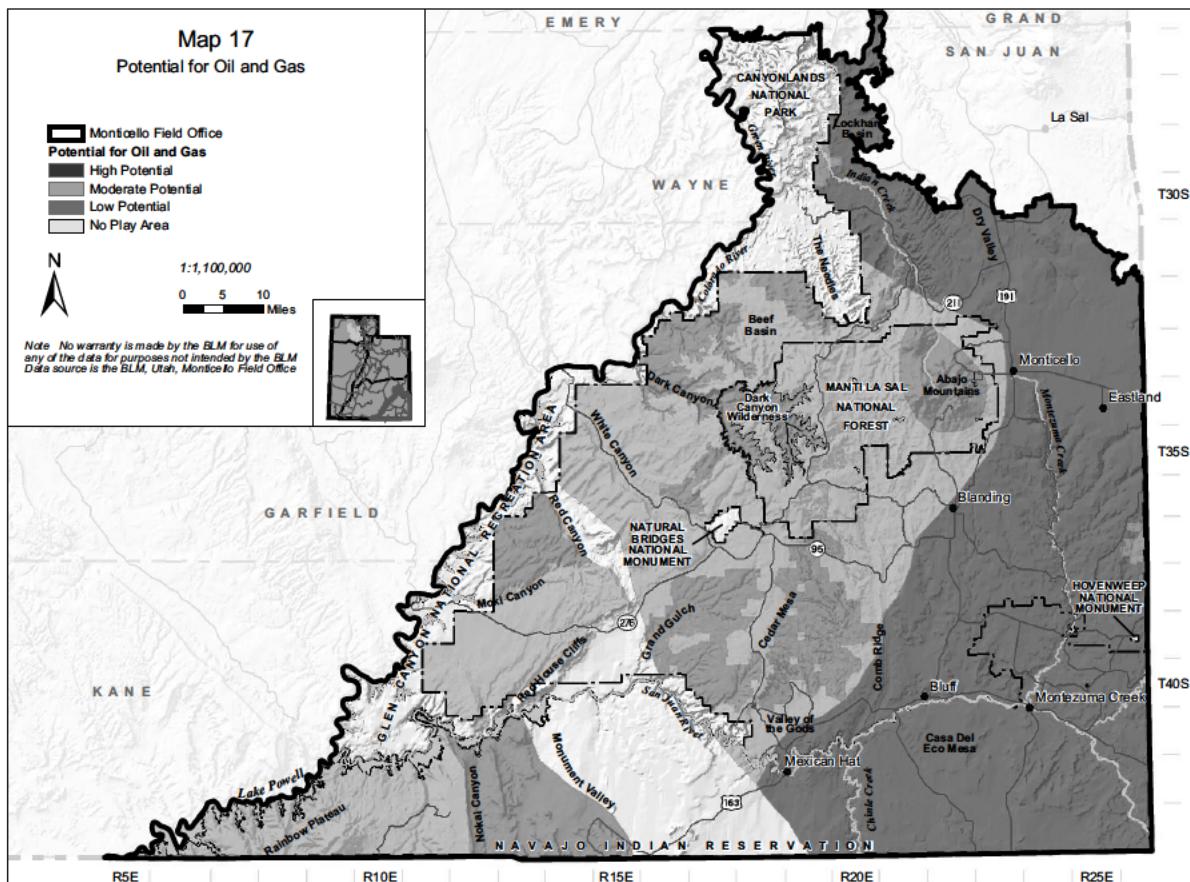
Bears Ears National Monument Boundary Modification

Nominated Oil and Gas Parcels



| | | | |
|------------------------|---------------------------------|--------------------------|--|
| Original BENM Boundary | Nominated Parcel | Private | Coordinate System: NAD 1983 UTM Zone 12N |
| Shash Jaa Unit | Wilderness Study Area | State | Projection: Transverse Mercator |
| Indian Creek Unit | Bureau of Land Management (BLM) | US Forest Service (USFS) | Date: December 8, 2017 |
| US Highway | Indian Reservation (IR) | USFS Wilderness Area | Units: Meter |
| State Highway | National Park Service (NPS) | | DOI-2019-08-00026 |

December 8, 2017





United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

440 West 200 South, Suite 500

Salt Lake City, UT 84101

<https://www.blm.gov/utah>



IN REPLY REFER TO:
(UT-9223-LG)

INFORMATION MEMO

TITLE: Cursory Review of the Mineral Potential/Occurrence within the Bears Ears NM

AUTHOR: Larry Garahana, Geologist (Certified Mineral Examiner 0147)

DATE: January 31, 2017

INTRODUCTION

The information within this memo gives an initial view through a series of maps showing mineral potential and occurrence within the newly designated Bears Ears National Monument, located within the Canyon Country District, Monticello Field Office, in San Juan County, Utah.

MEMO INFORMATION

The maps that were created for this memo are ones that show past or present mineral history, mineral potential or minerals that may be prospectively valuable within and around the new designation.

Some of the attached maps include information taken from the USGS Mineral Resource Data System (MRDS). MRDS describes metallic and nonmetallic mineral resources throughout the world. Included in the MRDS are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. Their interactive map (<https://mrdata.usgs.gov/mineral-resources/mrds-us.html>) has information on more than 180 commodities and this memo depicts a static representation of those commodities, past and present near and within the new designation. Although there was no prospect or production information near or within the monument for lithium, a lithium map was included for informational purposes due to the thousands of newly staked unpatented mining claims that were located north northeast of the monument. The information on the remaining maps was gathered from the most current BLM GIS data and it depicts potential and prospectively valuable mineral information on specific solid, fluid and leasable minerals within the subject area.

Illustration 3
(.34)

3031 - ENERGY AND MINERAL RESOURCE ASSESSMENT

Mineral Potential Classification System*I. Level of Potential

- O. The geologic environment, the inferred geologic processes, and the lack of mineral occurrences do not indicate potential for accumulation of mineral resources.
- L. The geologic environment and the inferred geologic processes indicate low potential for accumulation of mineral resources.
- M. The geologic environment, the inferred geologic processes, and the reported mineral occurrences or valid geochemical/geophysical anomaly indicate moderate potential for accumulation of mineral resources.
- H. The geologic environment, the inferred geologic processes, the reported mineral occurrences and/or valid geochemical/geophysical anomaly, and the known mines or deposits indicate high potential for accumulation of mineral resources. The "known mines and deposits" do not have to be within the area that is being classified, but have to be within the same type of geologic environment.
- ND. Mineral(s) potential not determined due to lack of useful data. This notation does not require a level-of-certainty qualifier.

II. Level of Certainty

- A. The available data are insufficient and/or cannot be considered as direct or indirect evidence to support or refute the possible existence of mineral resources within the respective area.
- B. The available data provide indirect evidence to support or refute the possible existence of mineral resources.
- C. The available data provide direct evidence but are quantitatively minimal to support or refute the possible existence of mineral resources.
- D. The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

For the determination of No Potential use O/D. This class shall be seldom used, and when used it should be for a specific commodity only. For example, if the available data show that the surface and subsurface types of rock in the respective area is batholithic (igneous intrusive), one can conclude, with reasonable certainty, that the area does not have potential for coal.

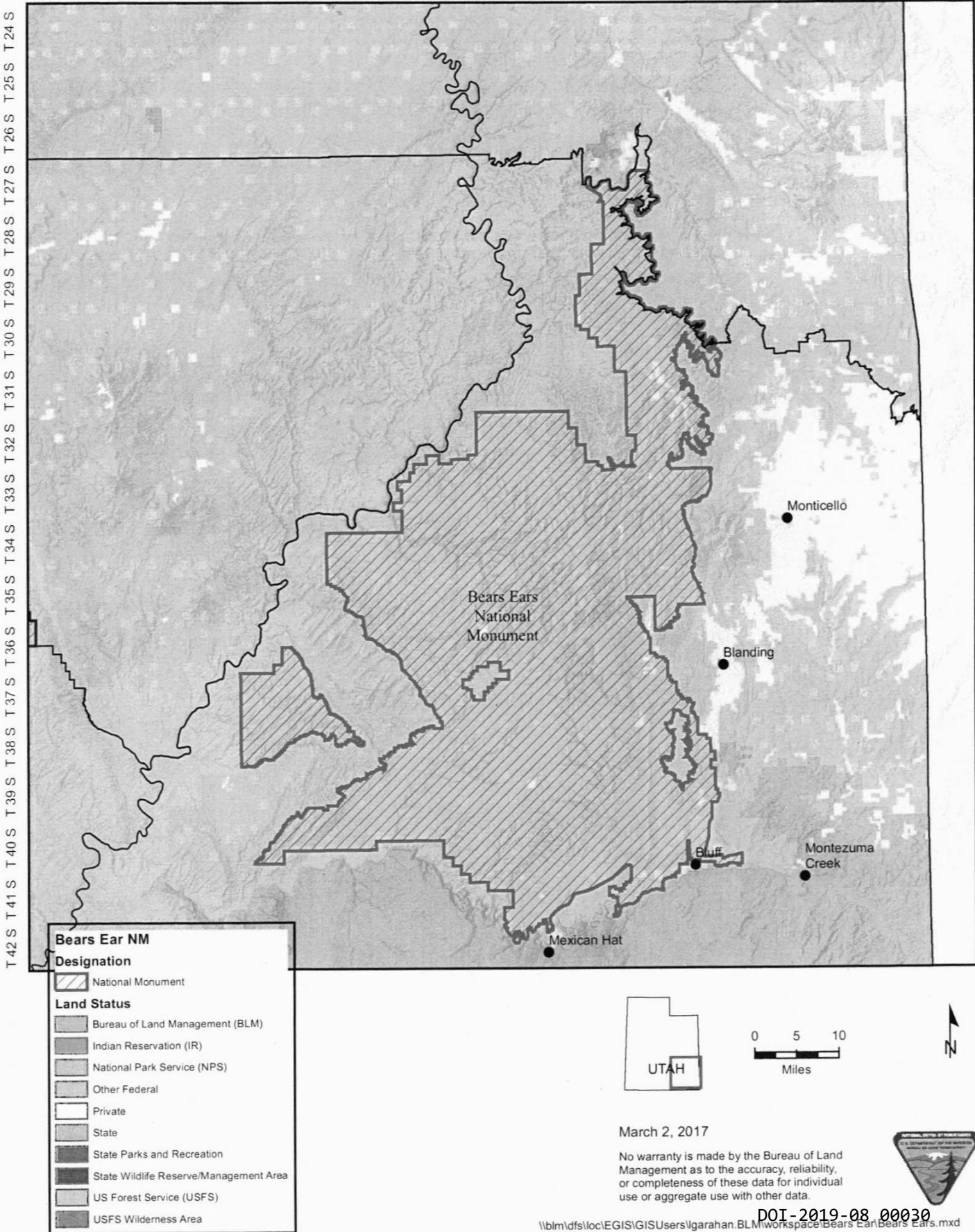
* As used in this classification, potential refers to potential for the presence (occurrence) of a concentration of one or more energy and/or mineral resources. It does not refer to or imply potential for development and/or extraction of the mineral resource(s). It does not imply that the potential concentration is or may be economic, that is, could be extracted profitably.

Rel. 3-115
6/19/85

BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

BEARS EAR NATIONAL MONUMENT

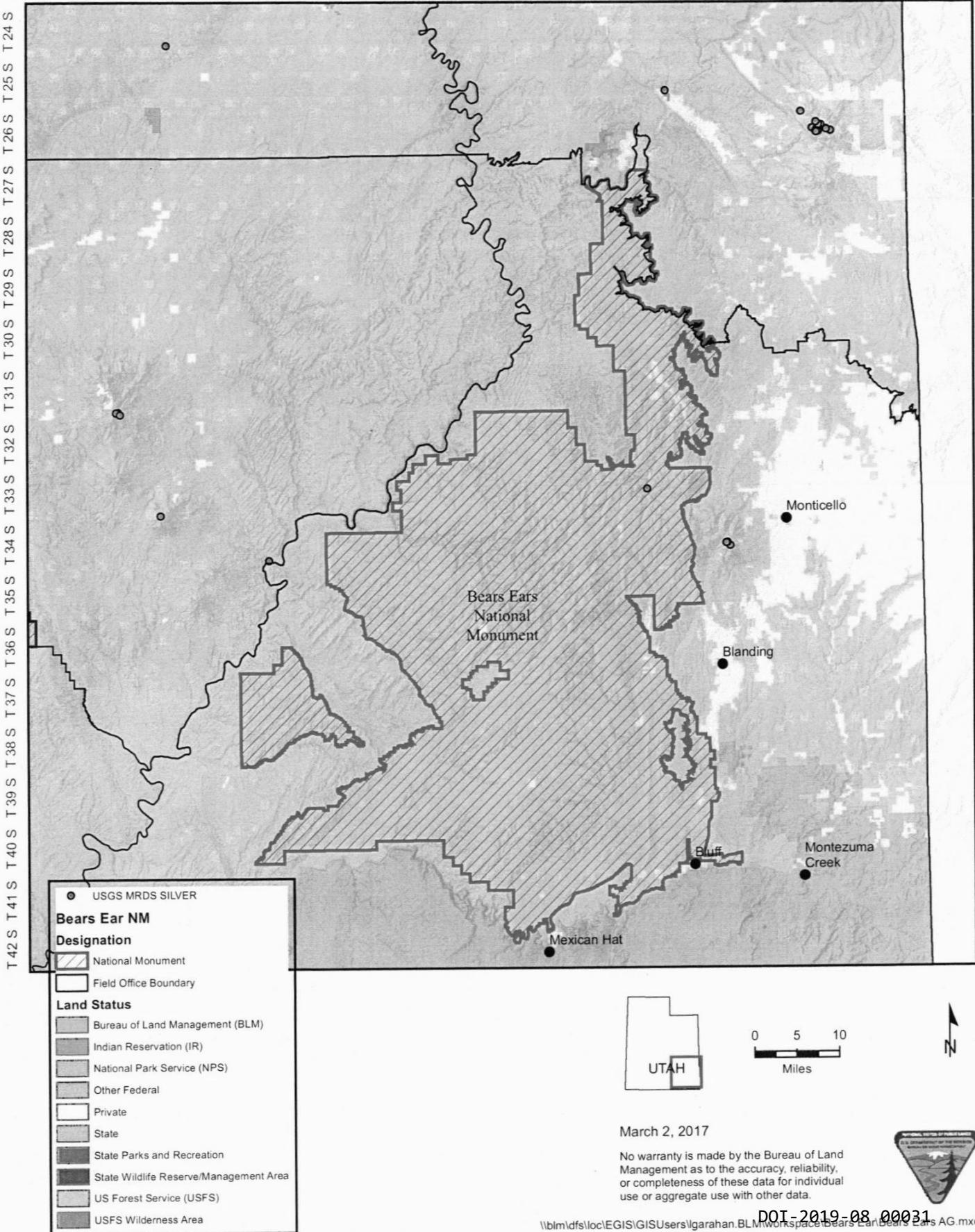
R9E R10E R11E R12E R13E R14E R15E R16E R17E R18E R19E R20E R21E R22E R23E R24E R25E



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

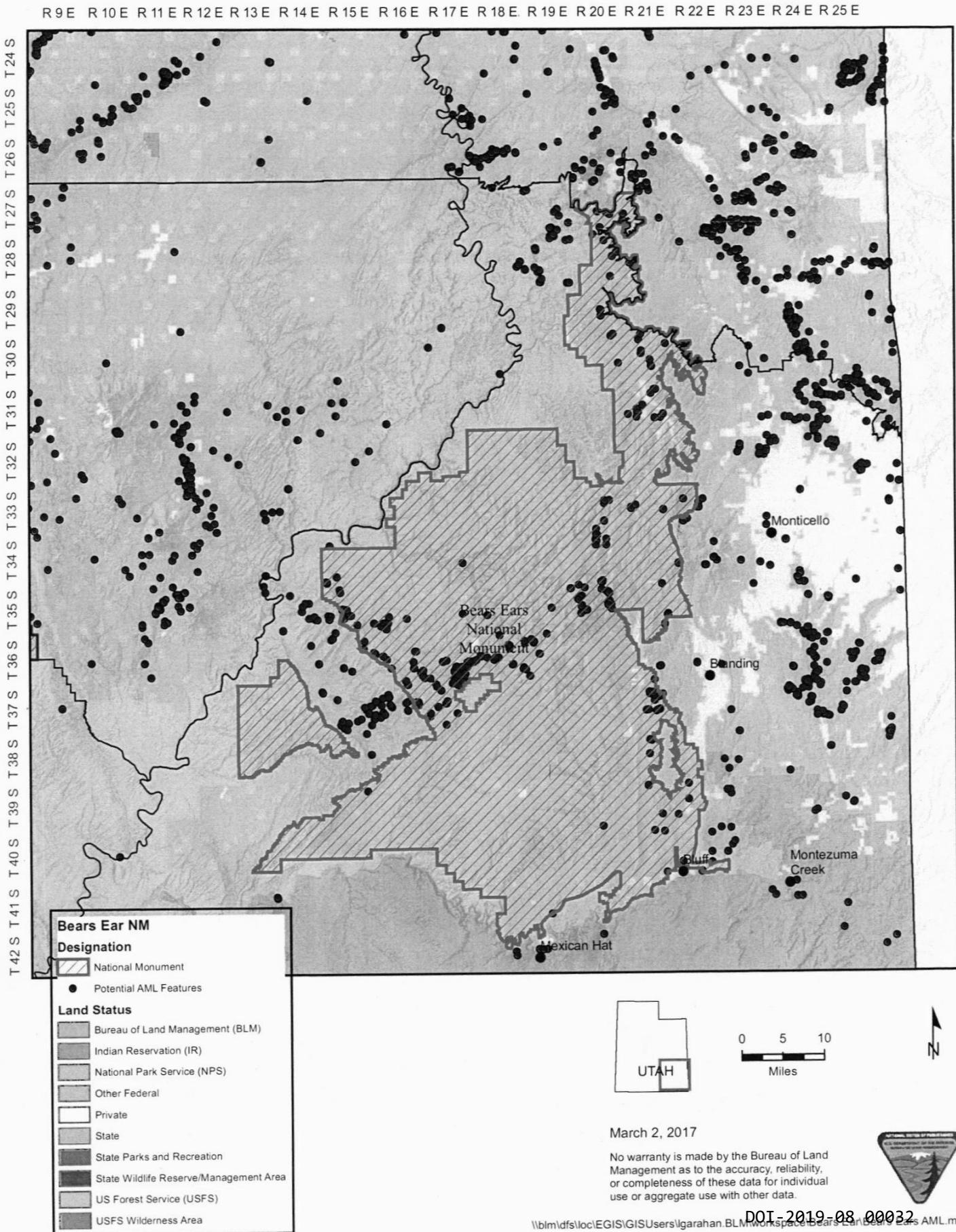
USGS MINERAL RESOURCE DATA SYSTEM SILVER

R 9 E R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

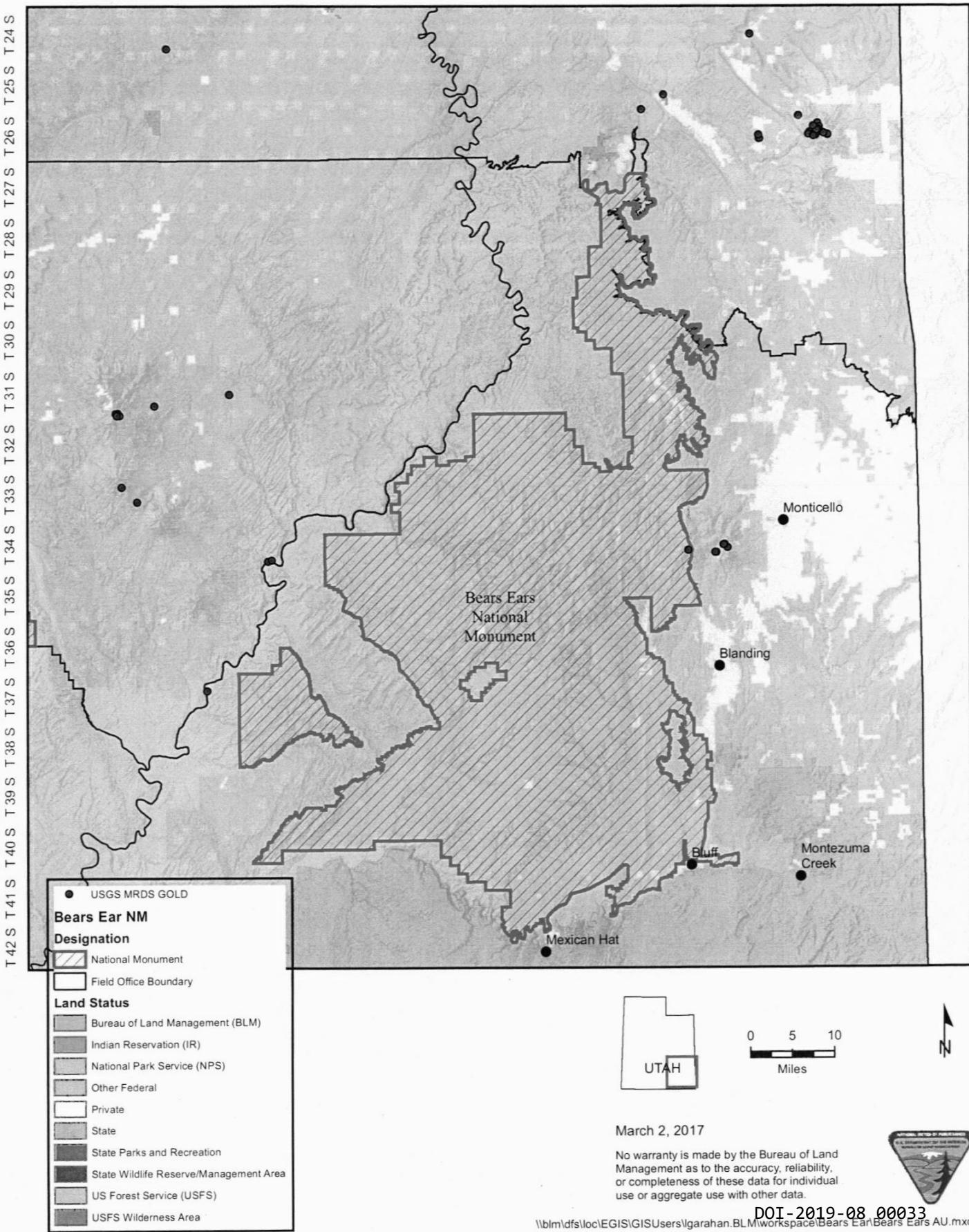
POTENTIAL AML FEATURES



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

USGS MINERAL RESOURCE DATA SYSTEM GOLD

R9E R10E R11E R12E R13E R14E R15E R16E R17E R18E R19E R20E R21E R22E R23E R24E R25E



March 2, 2017

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

\\blm\\dfs\\loc\\EGIS\\GISUsers\\garahan.BLM\\workspace\\Bears Ear\\Bears Ears AU.mxd

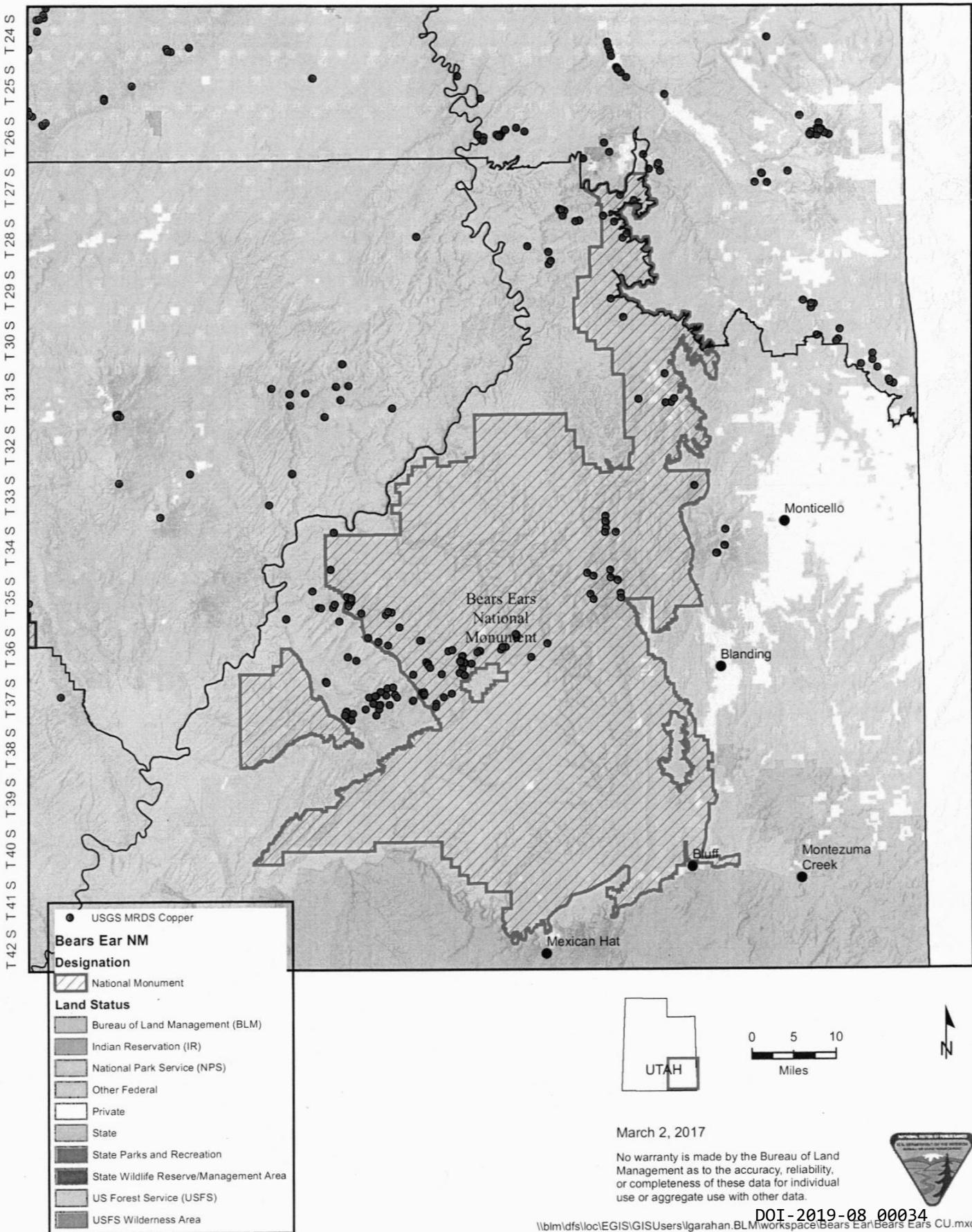
DOI-2019-08 00033



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

USGS MINERAL RESOURCE DATA SYSTEM COPPER

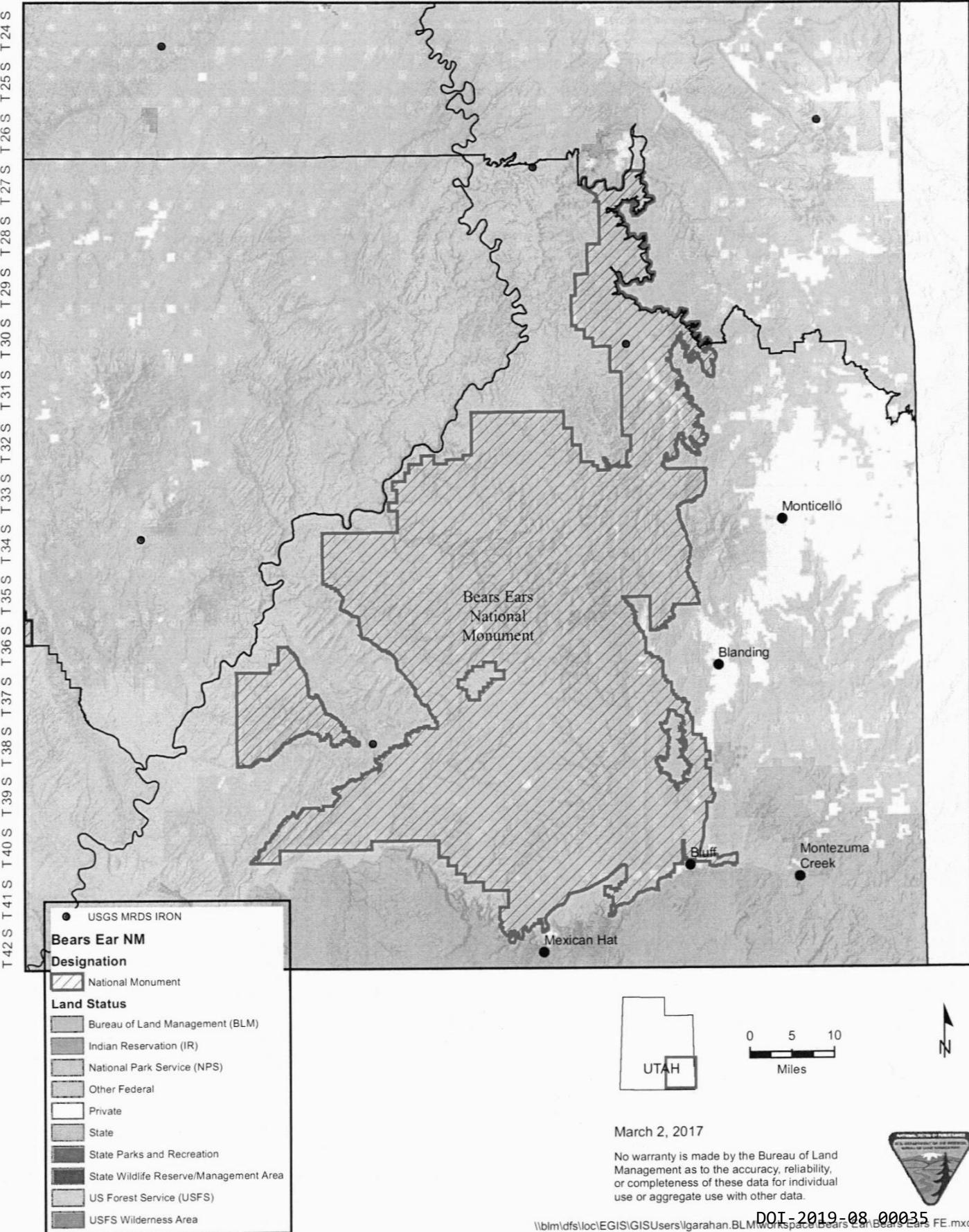
R9E R10E R11E R12E R13E R14E R15E R16E R17E R18E R19E R20E R21E R22E R23E R24E R25E



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

USGS MINERAL RESOURCE DATA SYSTEM IRON

R 9 E R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E



March 2, 2017

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

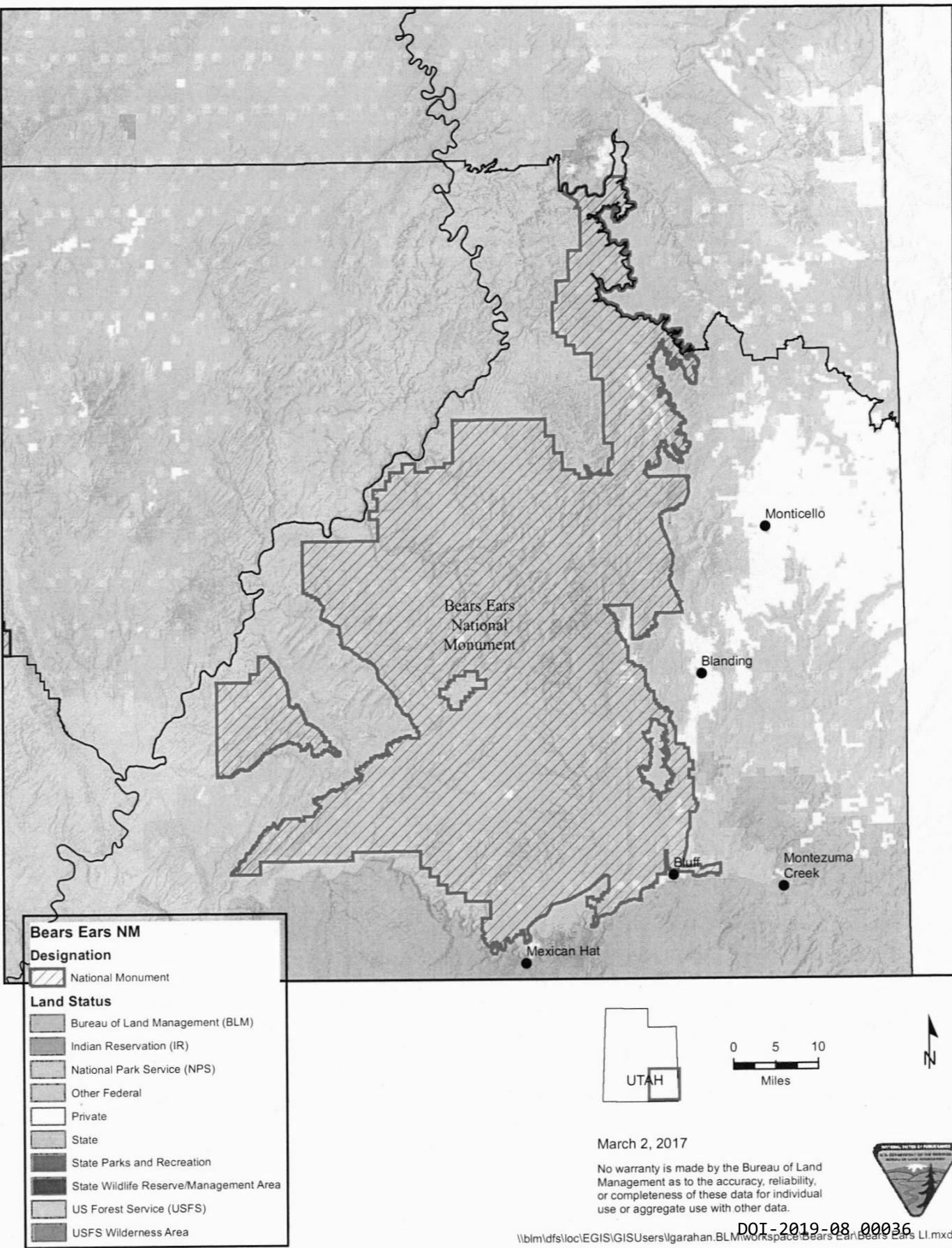


BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

USGS MINERAL RESOURCE DATA SYSTEM LITHIUM

R 9 E R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E

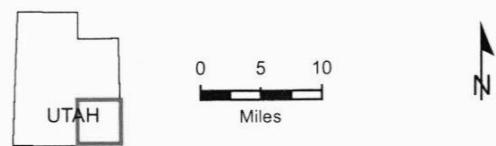
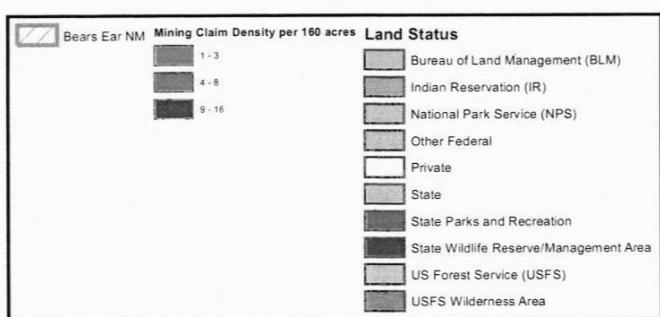
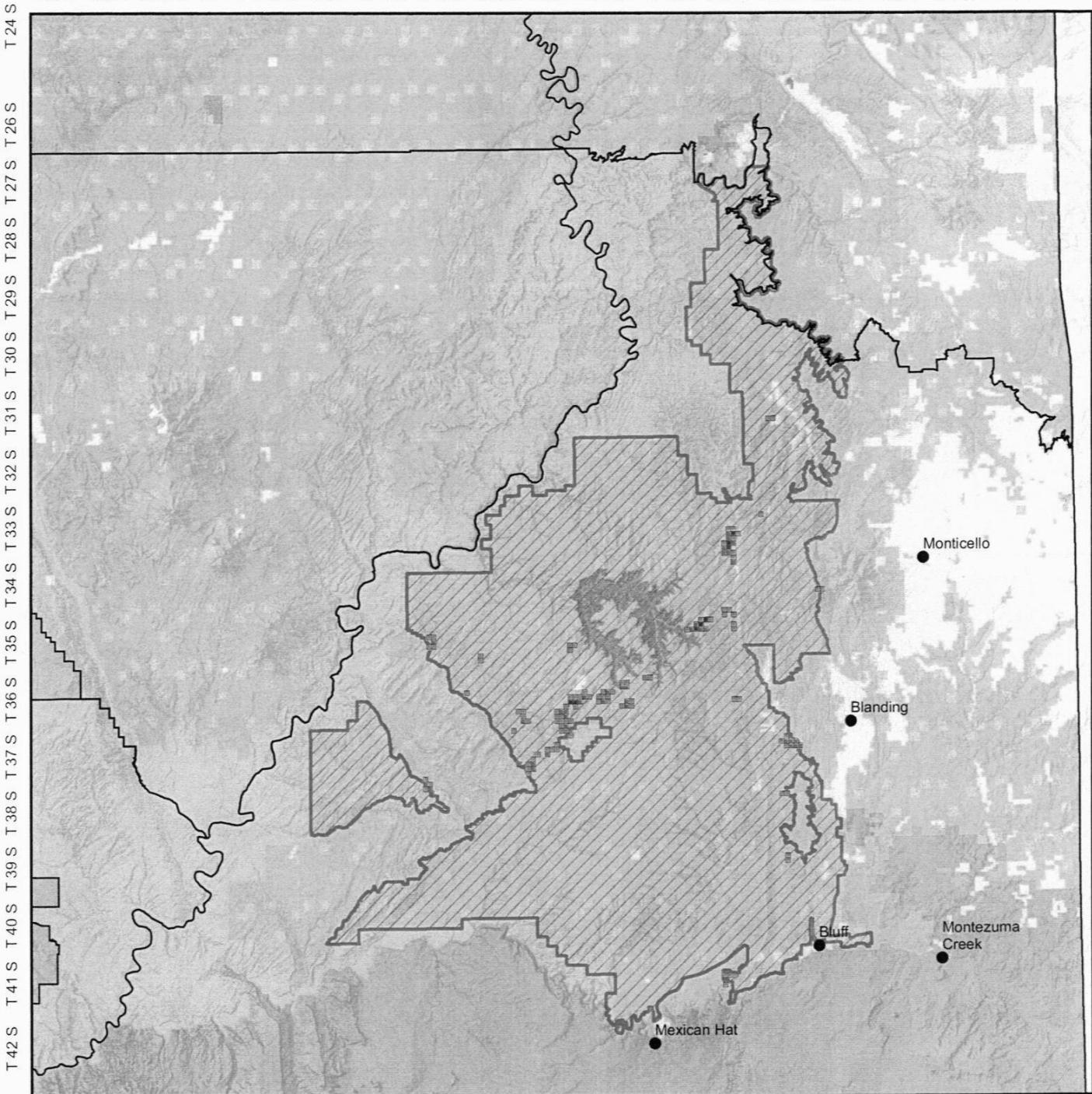
T 42 S T 41 S T 40 S T 39 S T 38 S T 37 S T 36 S T 35 S T 34 S T 33 S T 32 S T 31 S T 30 S T 29 S T 28 S T 27 S T 26 S T 25 S T 24 S



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

**MINING CLAIMS WITHIN THE BEARS EARS NM
AS OF SEPTEMBER 2016**

R8E R9E R10E R11E R12E R13E R14E R15E R16E R17E R18E R19E R20E R21E R22E R23E R24E R25E



February 22, 2017

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



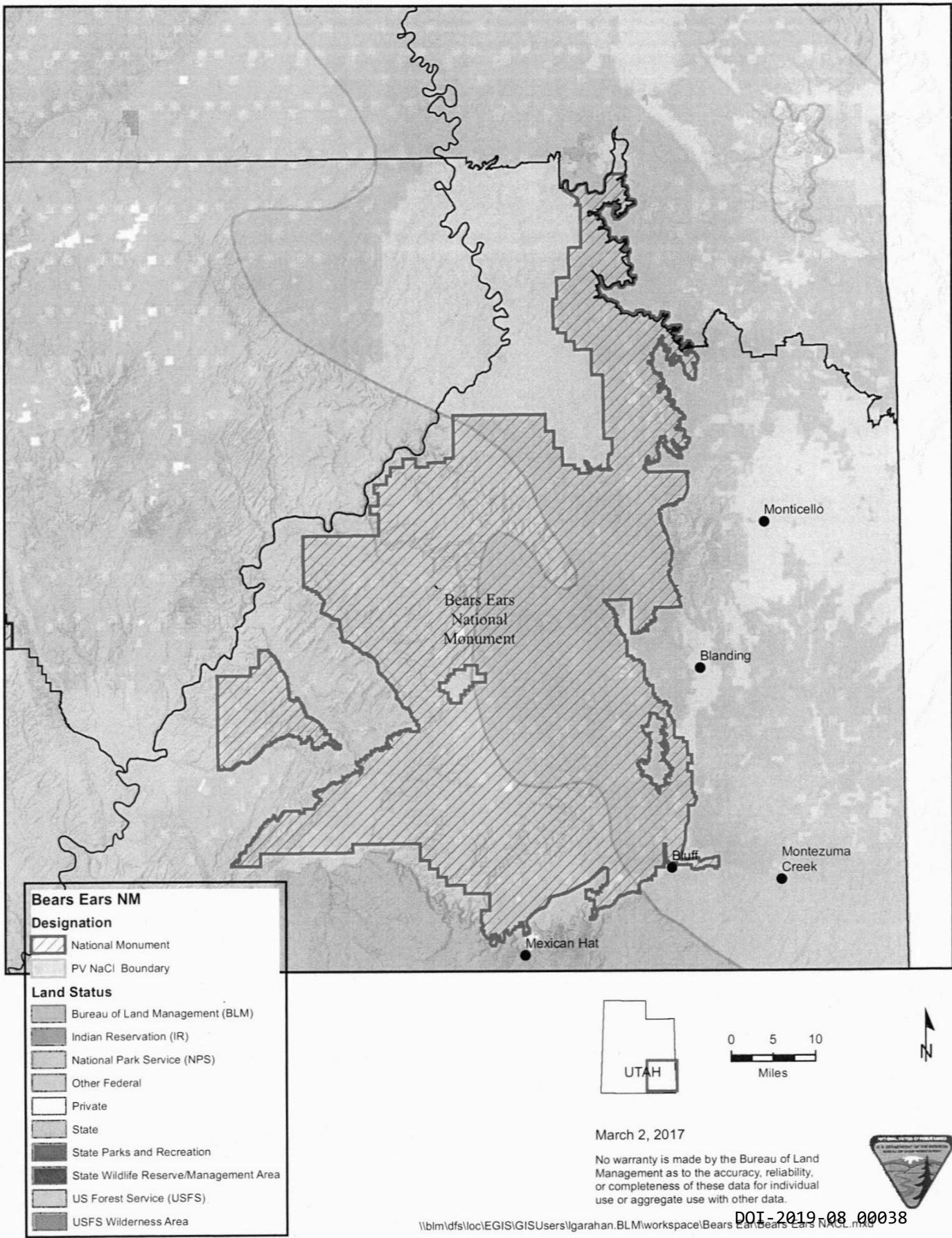
DOI-2019-08 00037

BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

PROSPECTIVELY VALUABLE FOR SODIUM CHLORIDE

R9 E R10 E R11 E R12 E R13 E R14 E R15 E R16 E R17 E R18 E R19 E R20 E R21 E R22 E R23 E R24 E R25 E

T42 S T41 S T40 S T39 S T38 S T37 S T35 S T34 S T33 S T32 S T31 S T30 S T29 S T28 S T27 S T26 S T25 S T24 S

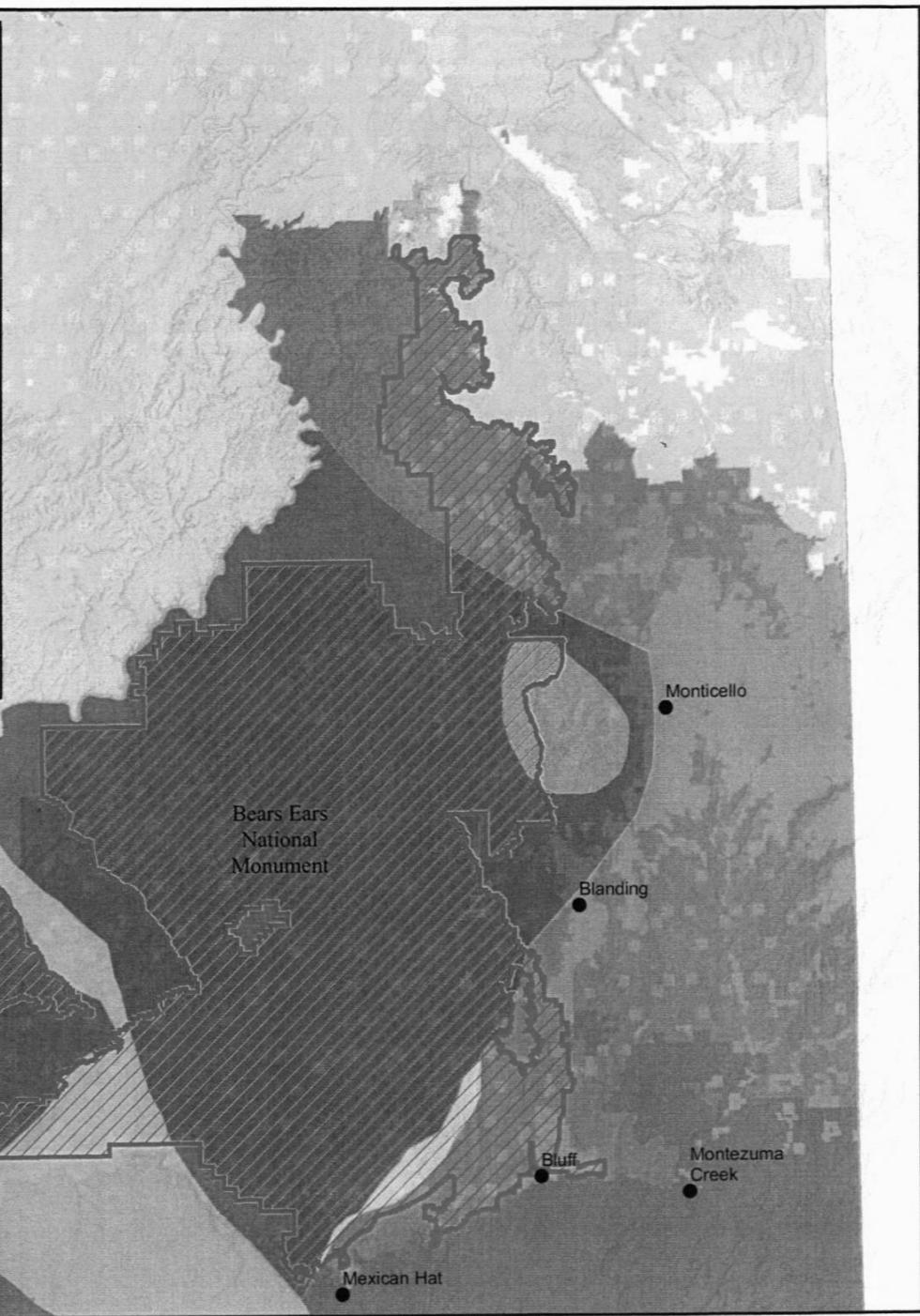
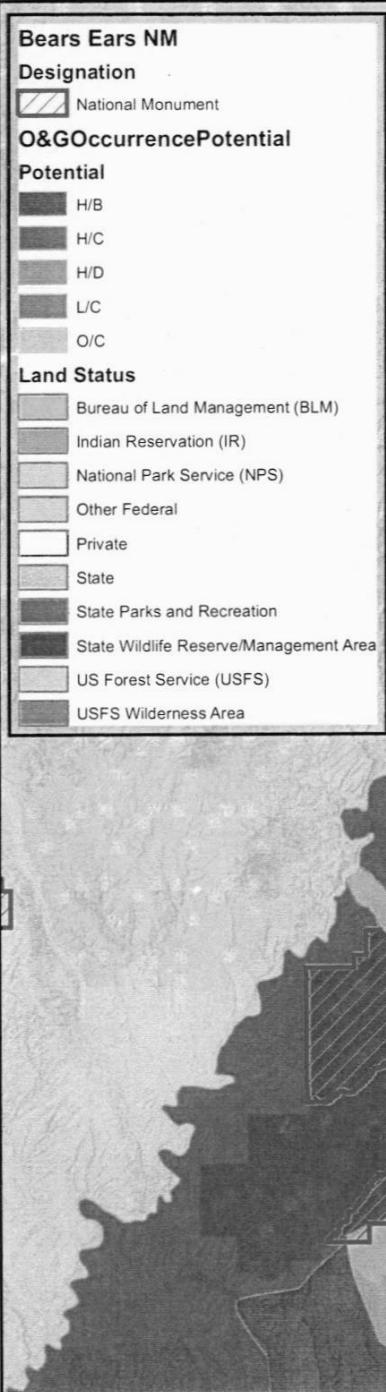


BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

OIL AND GAS POTENTIAL

R 9 E R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E

T 42 S T 41 S T 40 S T 39 S T 38 S T 37 S T 36 S T 35 S T 34 S T 33 S T 32 S T 31 S T 30 S T 29 S T 28 S T 27 S T 26 S T 25 S T 24 S



0 12.5 25
Miles



March 2, 2017

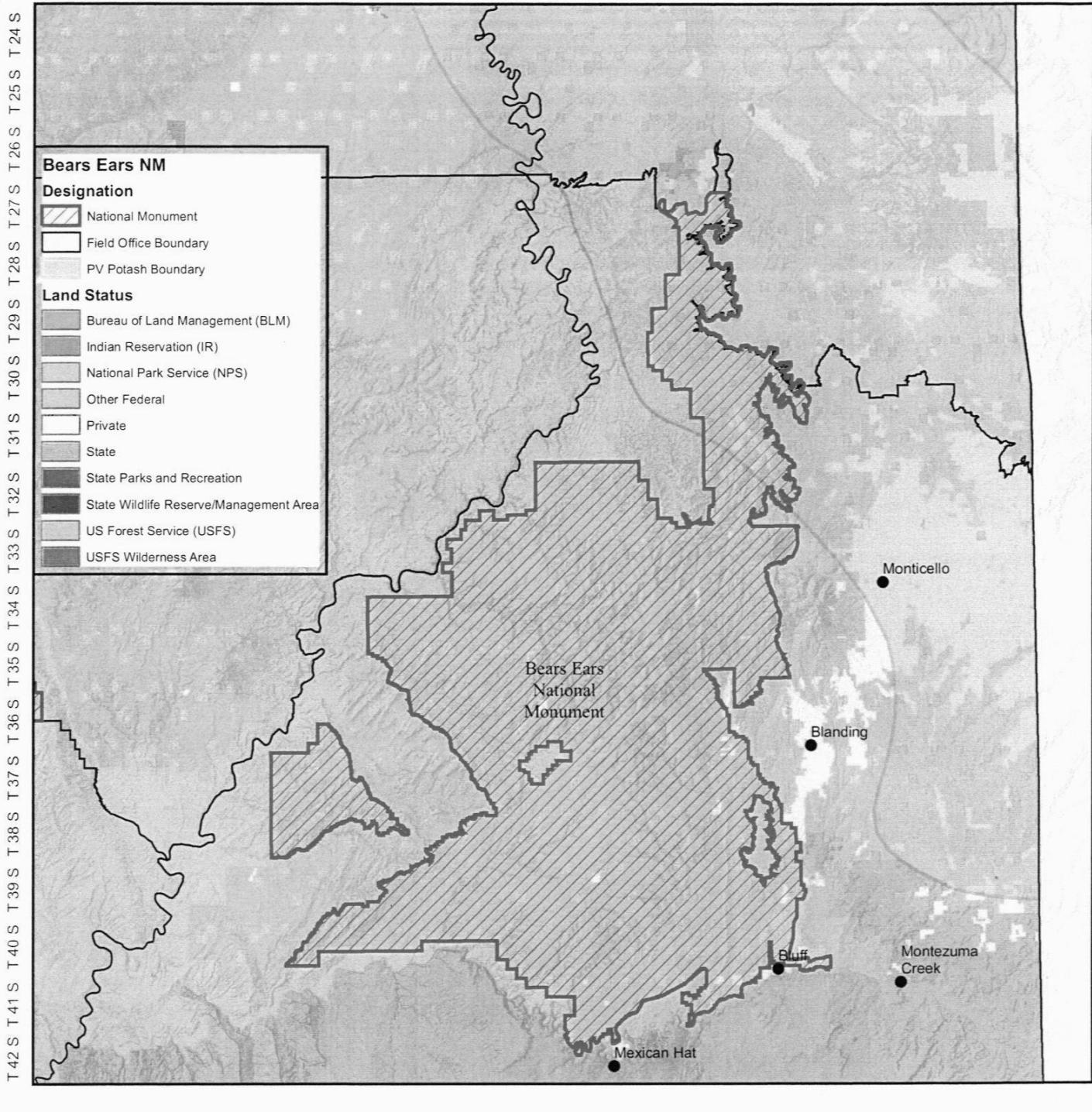
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

PROSPECTIVELY VALUABLE FOR POTASH

R 9 E R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E



0 12.5 25
Miles



March 2, 2017

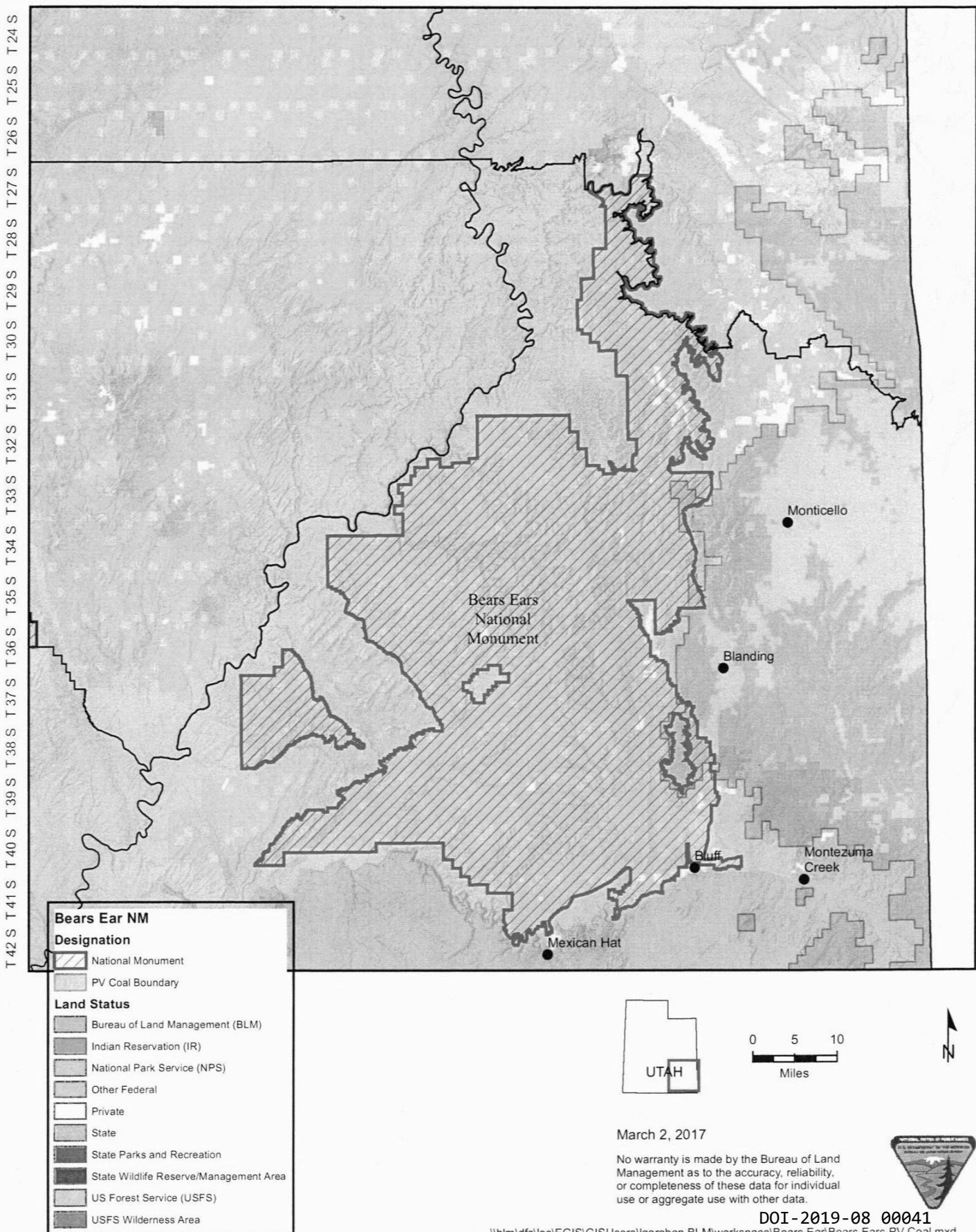
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

PROSPECTIVELY VALUABLE FOR COAL

R 9 E R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E

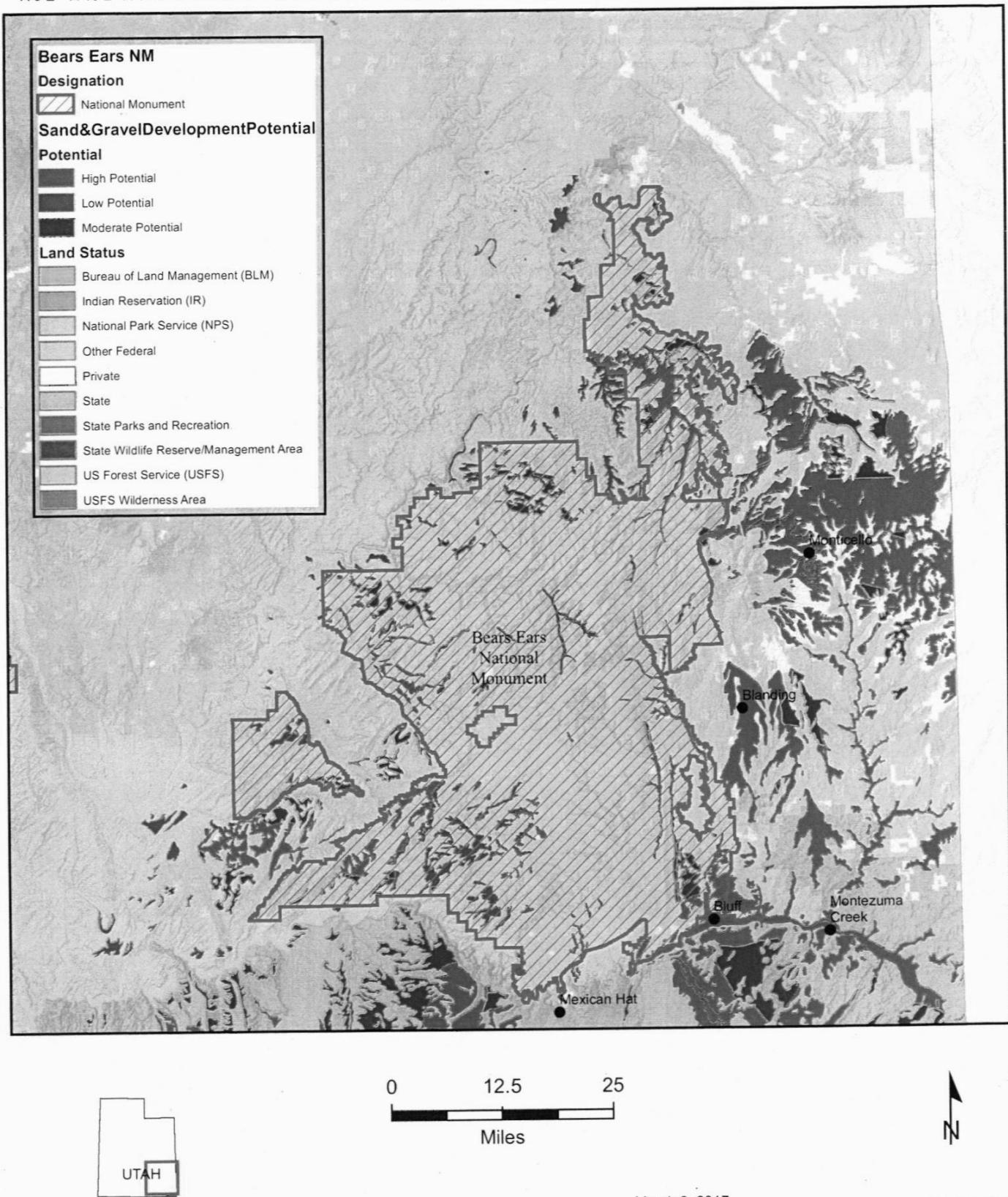


BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

MINERAL POTENTIAL FOR SAND AND GRAVEL

R 9 E R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E

T 42 S T 41 S T 40 S T 39 S T 38 S T 37 S T 36 S T 35 S T 34 S T 33 S T 32 S T 31 S T 30 S T 29 S T 28 S T 27 S T 26 S T 25 S T 24 S



0 12.5 25
Miles

March 2, 2017

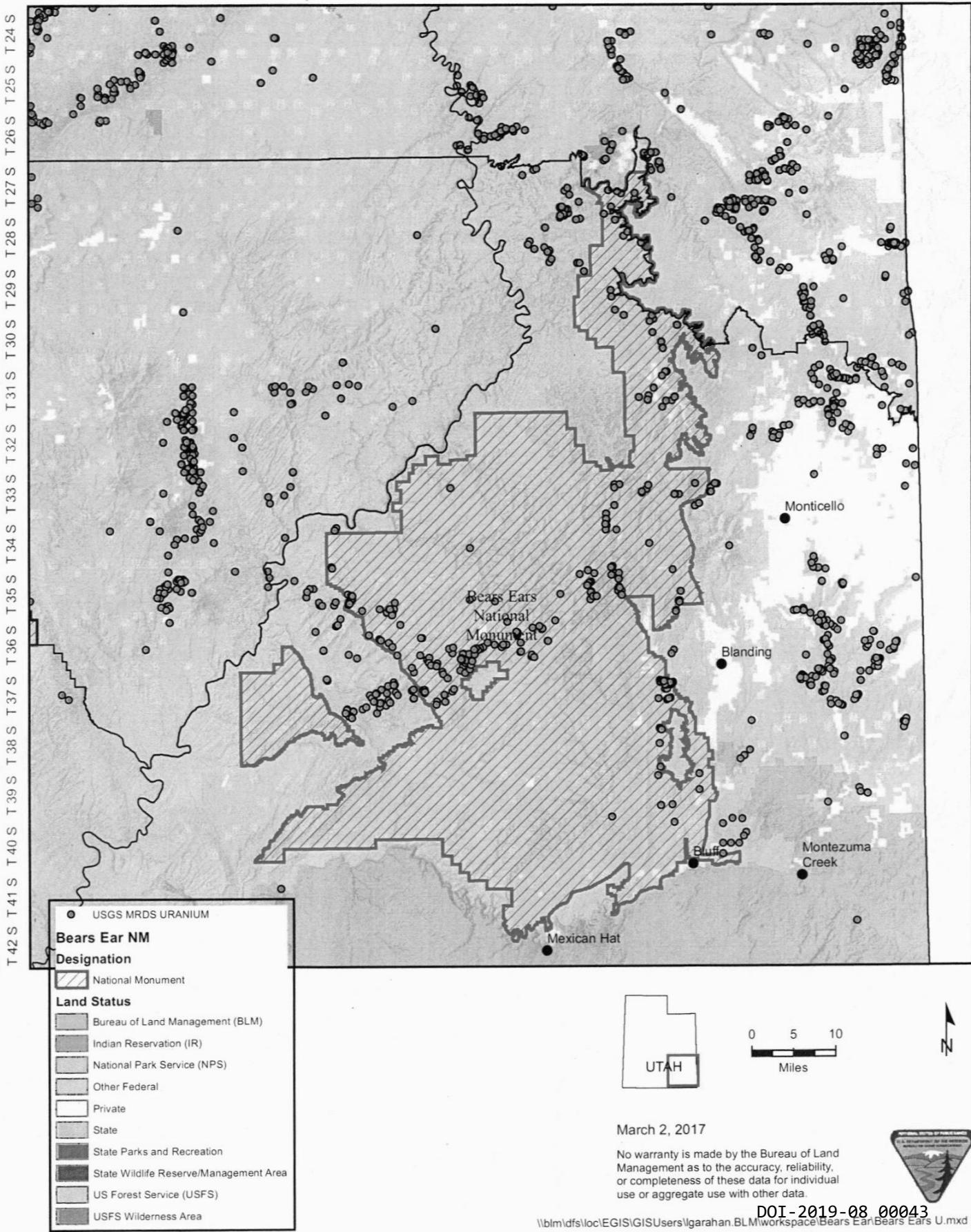
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

USGS MINERAL RESOURCE DATA SYSTEM URANIUM

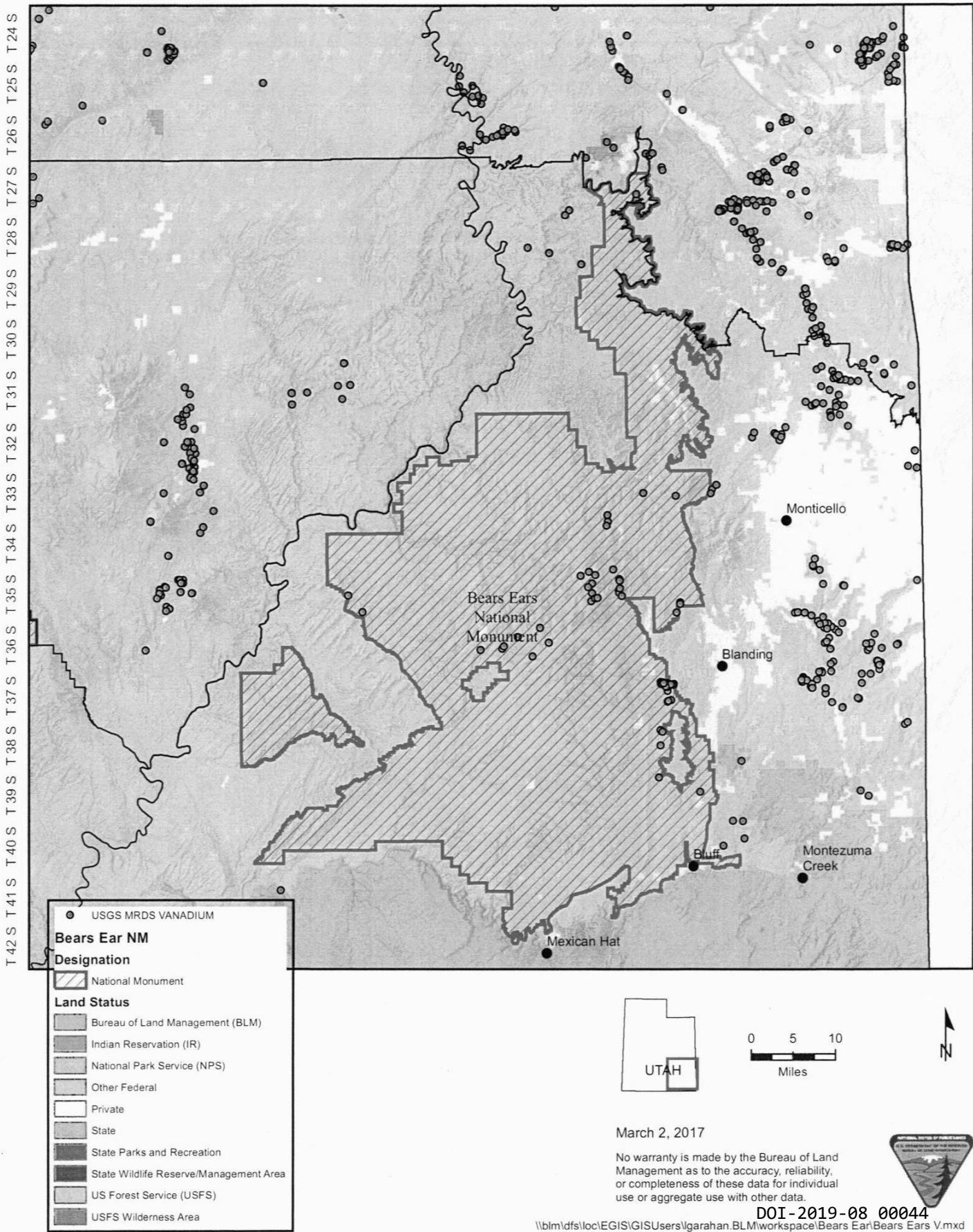
R 9 E R 10 E R 11 E R 12 E R 13 E R 14 E R 15 E R 16 E R 17 E R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E



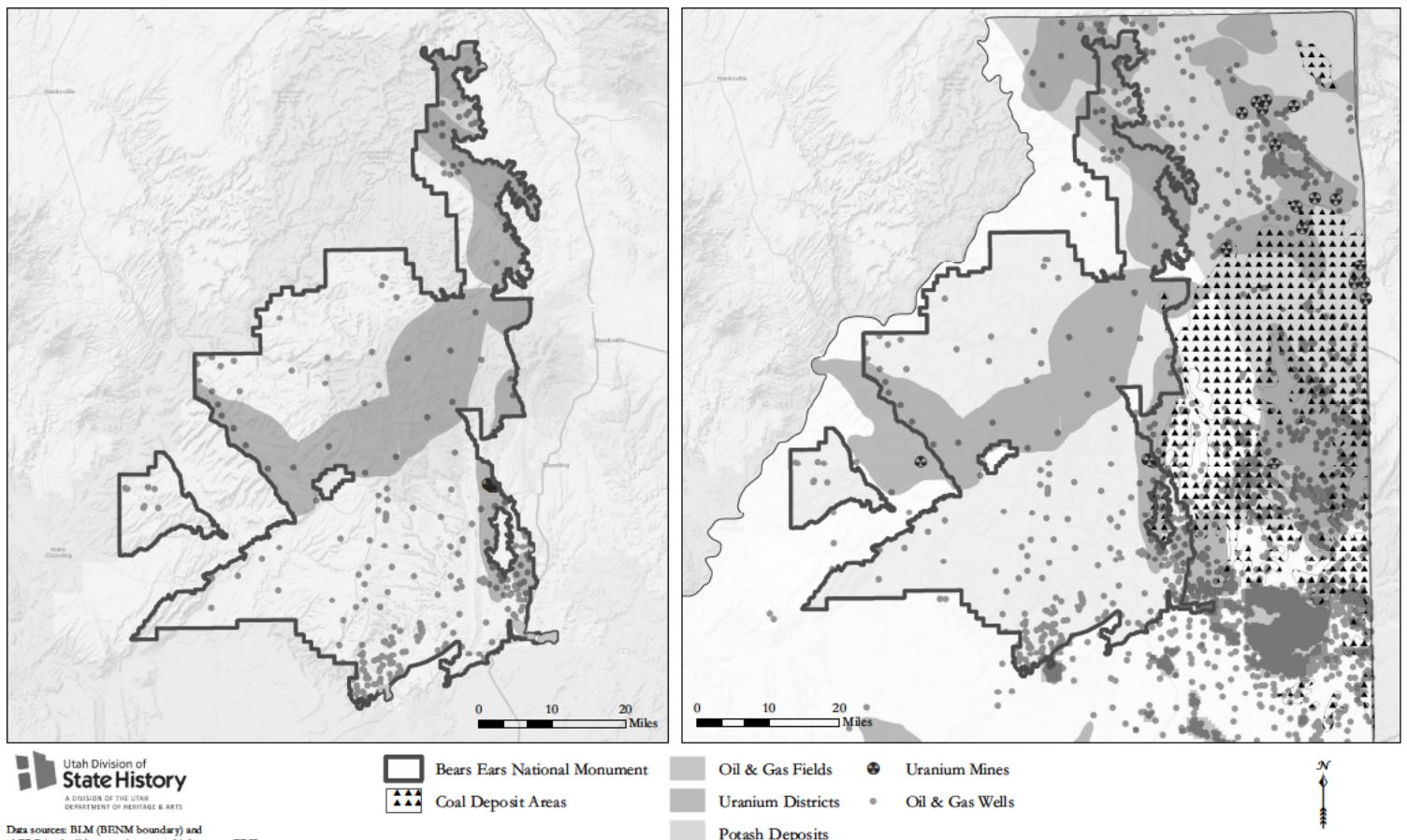
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

USGS MINERAL RESOURCE DATA SYSTEM VANADIUM

R9E R10E R11E R12E R13E R14E R15E R16E R17E R18E R19E R20E R21E R22E R23E R24E R25E



Energy Development in Bears Ears National Monument & San Juan County



Data sources: BLM (BENM boundary) and
AGRC (coal, oil/gas, uranium, potash); basemap: ESRI